



## **TERMS OF REFERENCE**

### **SHORT TERM CONSULTANCY**

**Short-term consultancy on “Development of A Continental Strategy for the Operationalization African Union Animal Resources Seed Centres of Excellence (AU-ARSCoEs)”**

**LIVE2AFRICA PROJECT**

## Background

Africa is home to a diverse world of Animal Genetic Resources displaying a vast range of Darwinian adaptations that continually evolve due to the ever-changing ecosystems. These Animal Genetic Resources (AnGR) for food and agriculture are essential for Africa's food security and contribute to the livelihoods of millions of people within and outside the continent. In the agricultural sector, livestock contributes significantly to the Gross Domestic Product (GDP) within Africa at approximately 30% and even up to 50% in some countries. A significant proportion of the African population depends on these resources as Staal et al., (2009) reports that 81 million and 28 million people are dependent on income generated from small ruminants in West Africa and Southern Africa respectively. It is estimated that over 80% of rural poor in Africa are smallholder livestock keepers. Livestock products such as milk and meat have been rated as some of the richest sources of protein contributing up to 13% of the world's calorie intake. Indeed, livestock hold promise to alleviate poverty and contribute significantly towards food and nutritional security. It is therefore critical that checks are put in place to prevent the loss of these valuable animal genetic resources that are the economic backbone and bread basket for many in rural Africa.

Biodiversity loss has been reported as the number three spot in the world's most severe threats in the annual Global Economic Risks Report (ref??) According to the AU-IBAR State of farm Animal Genetic Resources in Africa report of 2019, of the estimated 154 cattle breeds found within the African continent, 23 were classified as extinct. Various threats to indigenous AnGR diversity have been identified, such as; rampant and uncontrolled cross-breeding activities especially with exotic breeds, market trends whereby perceived economically beneficial animals are preferred to ecologically suitable ones, rapid genetic dilution, upgrading, replacement and limited systematic selection programmes for the improvement of indigenous AnGR. This is concerning as most of these endangered breeds are indigenous African breeds. These indigenous animals possess unique adaptive traits which include tolerance to diseases and pests, tolerance to heat, feed and water shortages, ability to cover long distances in search of resources, among others. Indigenous breeds also serve distinct uses in economic, social, cultural and other aspects in the African context. There has been a continuous call to action as evidenced by continental and international frameworks such as the Livestock Development Strategy for Africa (LiDESA), African Union Agenda 2063 and the United Nations Sustainable Development Goals (SDGs) and Global Plan of Action for AnGR (GPA) that actively advocate for the conservation and sustainable utilization of animal resources.

Conservation of these irreplaceable genetic resources therefore, becomes highly critical if Africa is to continue benefiting from its rich diversity of AnGR especially in the face of climate change. This could be achieved through an integrated approach which considers both in situ and ex situ conservation strategies. Through the recently concluded Genetics project "Strengthening the Capacity of African Countries to Conservation and Sustainable Utilization of African Animal Genetic Resources" of AU-IBAR in collaboration with AU Member States and

RECs, a strategy was devised to provide regional ex situ conservation facilities that would enable Member States to conserve their AnGR. This action culminated in the establishment of five (5) regional gene banks for cryo-conservation of animal genetic materials for the Member States. The gene banks were provided with the necessary equipment to empower them to serve as Regional Gene Banks. Their establishment would enable (i) MS without national gene banks to access cryo-conservation facilities (ii) provide back-up storage for security purposes for countries with national gene banks, and (iii) provide storage of genetic materials from transboundary breeds shared by the Member States in the five regions.

The following five Regional Animal Gene Banks were therefore established and launched as institutions for the conservation of animal genetic resources in Africa.

1. The Centre International de Recherche-Développement sur l'élevage en zone Sub-humide (CIRDES) (West Africa - Bobo Dioulasso, Burkina Faso);
2. The Department of Agricultural Research (DAR) (Southern Africa - Gaborone, Botswana);
3. The National Animal Genetic Resource Centre and Data Bank (NAGRIC & DB) (Eastern Africa - Entebbe, Uganda);
4. The University of Dschang (Central Africa - Dschang, Cameroon)
5. The Banque Nationale de Gènes (BNG) (North Africa - Tunis, Tunisia).

In addition, key strategic documents required to ensure the efficient running of the facilities were developed and validated. These included (i) Standard Operating Procedures (SOPs) for the technical, administrative and legal requirements for the management of regional gene banks for AnGR (ii) Validated Material Transfer Agreements (MTAs) for the movement of genetic materials between Inter and Intra – regionally (iii) Memorandum of Understanding with 17 Articles including covering aspects of institutional framework, objectives, access, management for collaborative action by Regional Economic Communities, Member States and Sub-Regional Focal Points

### **Context of the consultancy**

This consultancy is in line with the implementation of key actions such as Global Plan of Action for Animal Genetic Resources (GPA) that call upon collective and individual responsibilities towards promoting conservation, sustainable use and development of animal genetic resources for food and agriculture, food and nutritional security, improved livelihoods and for rural development. These provisions indicate clearly that governments and the international community should consider gene banking as an important element in the conservation of AnGR. It also emphasizes the need for concerted and collaborative action at regional and continental levels, especially regarding transboundary animal breeds.

At the recently concluded 4th Ordinary Session of Specialized Technical Committee (STC) on Agriculture Rural Development, Water and Environment (ARDWE) meeting, it was noted that African AnGR are facing imminent threats from the continual loss of animal diversity and some breeds have attained risk status ranging from endangered, critical to extinct due to their dwindling populations' sizes. It was also reported that in the Millennium Ecosystem

Assessment (MEA) documents, out of the 24 Ecosystem services that are crucial for human survival, 15 are in decline and there is urgent need to address the global issues at continental level to ensure coordinated mitigating actions. The STC reiterated the need to further strengthen Africa's conservation abilities as well as build technical capacities across the continent. It is in this understanding that the Committee endorsed the five established regional gene banks as Africa Union Animal Resources Seed Centres of Excellence (AU-ARS-CoE).

These centres will;

- (i) Support development and implementation of continental cryoconservation programmes
- (ii) Support development and implementation of cryoconservation strategies for animal genetic resources across the continent
- (iii) Offer training of stakeholders to develop and adopt innovative technologies – Primordial and pluripotent stem cells (Poultry), genomics and molecular characterization of local breeds
- (iv) Promote intra and inter regional sharing of genetic material across regions
- (v) Promote advocacy and awareness creation on sustainable utilization of local breed genetics

In addition, as per the global guidelines of conservation, it is recommended that a separate animal gene bank that will serve as a backup facility to provide security against accidental loss be established in a different location. During this session, the African Union Pan African Veterinary Vaccine Centre (AU-PANVAC) was endorsed as the continental back-up gene bank and it was recommended that there is need to strengthen the infrastructural and technical capacities of the institution in relation to conservation and sustainable utilization of animal genetic resources.

In the recently concluded technical workshop, several key outputs were realized (i) Draft Terms of reference for the African Union Animal seed Centres of Excellence (ii) Draft Assessment criteria for the African Union Animal seed Centres of Excellence and continental back-up (iii) Draft administrative structure/frameworks for governing the African Union Animal seed Centres of Excellence. These structures will be used as guidelines in the assessment of the host AU-ARS-CoE and the back-up facility and the development of a robust governance structure.

Therefore, to ensure that the African continent remains abreast with conservation and sustainable utilization of Animal genetic resources and to ensure that loss of critically endangered breeds is abated, it is paramount that the current momentum is maintained and an in-depth technical assessment of the existing host AU-ARS-CoE and the back-up facility as well as a governance framework is developed for adoption and domestication alongside the other strategic documents.

## **OBJECTIVES**

Therefore, AU-IBAR seeks the services of an independent technical leader to coordinate a team of experts to undertake a technical assessment of the existing African Union Animal resources Seed Centres of Excellences (AU-ARS-CoE) and continental back-up facility and develop a governance framework for the above-mentioned centres.

The specific objectives of the consultancy are to:

1. Evaluate/interrogate/assess the AU-ARS-CoE against the technical, administrative and infrastructure indicators of the assessment criteria.
2. Review and assess existing gene banking models/strategies at Member States or regional level for adoption and/or adaptation
3. Analyse and present a synthetic report on the Access and Benefit Sharing (ABS) framework for the movement of animal genetic material within the five regions
4. Develop a continental strategy incorporating the gene banking models incorporating digitalization, Access and Benefit Sharing, training communication action plan and governance frameworks
5. An accompanying implementation framework for operationalization of the AU-ARSCoE
6. Facilitate the validation of the consultancy outputs by Member States

## **EXPECTED OUTPUTS OF THE CONSULTANCY**

Working closely with the Live2Africa Technology, Innovations and Skill development expert and building on the above, the expected outputs of the consultancy will be:

- I. A well detailed Inception Report encompassing; introduction, methodology, and proposed workplan.
- II. The following reports (i) Detailed Assessment report of the existing ARS-CoE technical, administrative and infrastructure status (II) a Draft Continental Strategy on gene banking including communication framework, governance structures, training
- III. A report on potential obstacles to the effective movement of AnGR between the MS and the AU-ARS-CoE, and propose solutions
- IV. Final validated reports

### **Inception Report (IcTR)**

An Inception Report (IcTR) within 5 days of commencing duty. The IcTR of not more than 10 pages should include the proposed methodology, the timeline/calendar and programme of activities and an outline of the contents of the Final Continental Strategy/Technical Report.

### **Final Technical Reports (FTR)**

The Final Continental Strategy/Technical Report (FTR) should take into account contributions and comments from the relevant stakeholders and AU-IBAR. The draft final report must be submitted at the end of the period of implementation of the tasks.

## **DURATION**

The consultancy will be conducted over two months (60 days), starting from the day of the last signature on the contract.

## **REMUNERATION**

The consultancy fee will be a lump sum of USD 15,000 (fifteen thousand US dollars), covering all the costs incurred during the conduct of the consultancy. Any travel and daily subsistence costs under this consultancy will be borne by AU-IBAR as per the Rules and Regulations of the AUC.

Method of payment will be as follows:

- a) 30% upon receipt and approval of Draft Continental Strategy
- c) 70% upon receipt and approval of Final Continental Strategy

There shall be no other entitlements

## **QUALIFICATIONS**

A minimum post-graduate degree in Animal Science, Animal production, Genomics or related field is required. A PhD is an added advantage.

1. **Experience:** Minimum ten (10) years' work experience, of which at least five years' experience in AnGR conservation and management in Africa
2. Proficient in development of gene banking strategies and cryoconservation
3. Proficient in the development of governance frameworks for gene banks at national, regional or international level
4. Experience in training on conservation, cryoconservation and sustainable utilization
5. Experience in the development, adaptation and application of technologies and innovations for cryoconservation, characterization and biobanking
6. Experience in working with African stakeholders in conservation and sustainable utilization of Animal genetic resources

**Language:** Excellent grasp of both written and oral English and/or French is a must.

## **COMPETENCIES**

**Professionalism** – good understanding and knowledge of animal resources development, agricultural economics, communication, advocacy or other relevant disciplines.

**Planning and Organizing** – Ability to plan own work and manage conflicting priorities. Demonstrate effective organizational skills and ability to handle work in an efficient and timely manner.

**Writing and Communication** – excellent writing skills; ability to write in a clear and concise manner and to communicate messages effectively

**Supervision and Coordination**

The consultant will work closely with the Live2Africa Technology, Innovations and Skill development expert.

#### **HOW TO APPLY**

Please submit your CV including three references and a proposal including workplan latest **30<sup>th</sup> September 2022** to the Director of AU-IBAR, Kenindia Business Park, Museum Hill, Westlands Road, PO Box 30786-00100 Nairobi, Kenya or email at [procurement@au-ibar.org](mailto:procurement@au-ibar.org) clearly indicating in the subject line “**Development of A Continental Strategy for the Operationalization African Union Animal Resources Seed Centres of Excellence (AU-ARSCoEs)**”. Only short-listed candidates will be notified.